

**What Is Claimed Is:**

1        1.    A shared device for connecting a computer, a  
2 telephone, and a telephone receiver, comprising:

3        a voice divider, for receiving a first voice signal from  
4            the computer, a second voice signal from the  
5            telephone, and a third voice signal from the  
6            telephone receiver, and dividing the first voice  
7            signal into two first voice divided signals, the  
8            second voice signal into two second voice divided  
9            signals, and the third voice signal into two third  
10          voice divided signals; and

11       a mixer, for receiving the voice divided signals, mixing  
12          a first and a second voice divided signal then  
13          transmitting the mixed signal to the telephone  
14          receiver, mixing the other first and a third voice  
15          divided signal then transmitting the mixed signal to  
16          the telephone, and mixing the other second and the  
17          other third voice divided signal then transmitting  
18          the mixed signal to the computer.

1        2.    The shared device according to claim 1, further  
2 comprising a first amplifier, disposed between the computer and  
3 the voice divider for amplifying the first voice signal before  
4 sending it to the voice divider.

1        3.    The shared device according to claim 2, further  
2 comprising an impedance matcher, disposed between the first  
3 amplifier and the computer for adjusting the volume and  
4 voice-frequency of the voice signal from the computer according

5 to a differential impedance between the computer and the  
6 telephone.

1 4. The shared device according to claim 3, further  
2 comprising a second amplifier, disposed between the telephone  
3 and the voice divider for amplifying the second voice signal  
4 before sending it to the voice divider.

1 5. The shared device according to claim 1, further  
2 comprising an amplifier, disposed in between the telephone and  
3 the voice divider for amplifying the second voice signal before  
4 sending it to the voice divider.

1 6. A shared device for connecting a computer, a  
2 telephone, and a telephone receiver, comprising:  
3 three voice dividers, wherein a first voice divider  
4 receives a first voice signal from the computer then  
5 divides it into two first voice divided signals, a  
6 second voice divider receives a second voice signal  
7 from the telephone then divides it into two second  
8 voice divided signals, a third voice divider receives  
9 a third voice signal from the telephone receiver then  
10 divides it into two third voice divided signals, and  
11 three mixers, wherein a first mixer receives and mixes a  
12 first and a second voice divided signal then sends  
13 the mixed signal to the telephone receiver, a second  
14 mixer receives and mixes the other first and a third  
15 voice divided signal then sends the mixed signal to  
16 the telephone, and a third mixer receives and mixes  
17 the other second and the other third voice divided  
18 signal then sends the mixed signal to the computer.

1        7. The shared device according to claim 6, further  
2 comprising a first amplifier, disposed between the computer and  
3 the first voice divider for amplifying the first voice signal  
4 before sending it to the first voice divider.

1        8. The shared device according to claim 7, further  
2 comprising an impedance matcher, disposed between the first  
3 amplifier and the computer for adjusting the volume and  
4 voice-frequency of the voice signal from the computer according  
5 to a differential impedance between the computer and the  
6 telephone.

1        9. The shared device according to claim 8, further  
2 comprising a second amplifier, disposed between the telephone  
3 and the second voice divider for amplifying the second voice  
4 signal before sends it to the second voice divider.

1        10. The shared device according to claim 6, further  
2 comprising an amplifier, disposed between the telephone and the  
3 second voice divider for amplifying the second voice signal  
4 before sends it to the second voice divider.

5        11. A shared device for connecting a computer, a  
6 telephone, and an internal phone exchanger, comprising:  
7        a voice divider, for receiving a first voice signal from  
8        the computer, a second voice signal from the  
9        telephone, and a third voice signal from the internal  
10       phone exchange, and dividing the first voice signal  
11       into two first voice divided signals, the second  
12       voice signal into two second voice divided signals,

13           and the third voice signal into two third voice  
14           divided signals; and  
15       a mixer, for receiving the voice divided signals, mixing  
16           a first and a second voice divided signal then  
17           transmitting the mixed signal to the internal phone  
18           exchange, mixing the other first and a third voice  
19           divided signal then transmitting the mixed signal to  
20           the telephone, and mixing the other second and the  
21           other third voice divided signal then transmitting  
22           the mixed signal to the computer.

1       12. The shared device according to claim 11, further  
2       comprising a first amplifier, disposed between the computer and  
3       the voice divider for amplifying the first voice signal before  
4       sends it to the voice divider.

1       13. The shared device according to claim 12, further  
2       comprising an impedance matcher, disposed between the first  
3       amplifier and the computer for adjusting the volume and  
4       voice-frequency of the voice signals from the computer according  
5       to a differential impedance between the computer and the  
6       telephone.

1       14. The shared device according to claim 13, further  
2       comprising a second amplifier, disposed between the internal  
3       phone exchanger and the voice divider for amplifying the second  
4       voice signal before sending it to the voice divider.

1       15. The shared device according to claim 11, further  
2       comprising an amplifier, disposed between the telephone and the

3 voice divider for amplifying the second voice signal before  
4 sending it to the voice divider.

1 16. A multiple communication system, comprising:  
2 a computer, communicating with at least one remote Internet  
3 client through a communication network, receiving a  
4 first voice signal from the remote Internet client,  
5 wherein the communication network composed of at  
6 least one of the Internet, a local area network, and  
7 a leased line;  
8 a telephone, communicating with a remote telephone through  
9 a telephone network, receiving a second voice signal  
10 from the remote telephone;  
11 a telephone receiver, receiving a third voice signal from  
12 the telephone receiver user; and  
13 a shared device, connecting the computer, the telephone,  
14 and the telephone receiver, comprising a voice  
15 divider and a mixer, wherein the voice divider  
16 receives the first voice signal from the computer,  
17 the second voice signal from the telephone, and the  
18 third voice signal from the telephone receiver, and  
19 divides the first voice signal into two first voice  
20 divided signals, the second voice signal into two  
21 second voice divided signals, and the third voice  
22 signal into two third voice divided signals, and the  
23 mixer receives the voice divided signals, mixes a  
24 first and a second voice divided signal then sends  
25 the mixed signal to the telephone receiver, mixes the  
26 other first and a third voice divided signal then  
27 sends the mixed signal to the telephone, and mixes

28                   the other second and the other third voice divided  
29                   signal then sends the mixed signal to the computer.

1           17. The multiple communication system according to claim  
2 16, wherein the shared device further comprising:  
3           a first amplifier, disposed between the computer and the  
4           voice divider for amplifying the first voice signal  
5           before sending it to the voice divider;  
6           a second amplifier, disposed between the telephone and the  
7           voice divider for amplifying the second voice signal  
8           before sending it to the voice divider; and  
9           an impedance match, disposed between the first amplifier  
10           and the computer for adjusting the volume and  
11           voice-frequency of the voice signal from the computer  
12           according to a differential impedance between the  
13           computer and the telephone.

1           18. The multiple communication system according to claim  
2 16, further comprising a video camera installed in the computer  
3 for recording and sending the video of the telephone receiver  
4 user to the remote Internet client.

1           19. A multiple communication system, comprising:  
2           a computer, communicating with at least one remote Internet  
3           client through a communication network, receiving a  
4           first voice signal from the remote Internet client,  
5           wherein the communication network composed of at  
6           least one of the Internet, a local area network, and  
7           a leased line;

8       a telephone, communicating with a remote telephone through  
9       a telephone network, receiving a second voice signal  
10       from the remote telephone;  
11       a telephone receiver, receiving a third voice signal from  
12       the telephone receiver user; and  
13       a shared device, connected to the computer, the telephone,  
14       and the telephone receiver, comprising three voice  
15       dividers and three mixers, wherein a first voice  
16       divider receives the first voice signal from the  
17       computer then divides the first voice signal into two  
18       first voice divided signals, a second voice divider  
19       receives the second voice signal from the telephone  
20       then divides the second voice signal into two second  
21       voice divided signals, and a third voice divider  
22       receives the third voice signal from the telephone  
23       receiver then divides the third voice signal into two  
24       third voice divided signals, and a first mixer  
25       receives and mixes a first and a second voice divided  
26       signal then sends the mixed signal to the telephone  
27       receiver, a second mixer receives and mixes the other  
28       first and a third voice divided signal then sends the  
29       mixed signal to the telephone, and a third mixer  
30       receives and mixes the other second and the other  
31       third voice divided signals then sends the mixed  
32       signal to the computer.

1       20. The multiple communication system according to claim  
2       19, wherein the shared device further comprising:

3       a first amplifier, disposed between the computer and the  
4           first voice divider for amplifying the first voice  
5           signal before sending it to the first voice divider;  
6       a second amplifier, disposed between the telephone and the  
7           second voice divider for amplifying the second voice  
8           signal before sending it to the second voice divider;  
9       and  
10      an impedance matcher, disposed between the first amplifier  
11           and the computer for adjusting the volume and  
12           voice-frequency of the voice signal from the computer  
13           according to a differential impedance between the  
14           computer and the telephone.

1       21. The multiple communication system according to claim  
2      19, further comprising a video camera installed in the computer  
3      for recording and sending video of the telephone receiver user  
4      to the remote Internet client.

1       22. A multiple communication system, comprising:  
2      a computer, communicating with at least a remote Internet  
3           client through network, receiving a first voice  
4           signal from the remote Internet client, wherein the  
5           communication network composed of at least one of the  
6           Internet, a local area network, and a leased line;  
7      a telephone exchange, communicating with a remote  
8           telephone through a telephone network, receiving a  
9           second voice signal from the remote telephone;  
10     a telephone and telephone receiver thereof, receiving a  
11           third voice signal from the telephone receiver user;  
12     and



13       a shared device, connecting the computer, the telephone  
14       exchange, and the telephone, comprising a voice  
15       divider and a mixer, wherein the voice divider  
16       receives the first voice signal from the computer,  
17       the second voice signal from the telephone exchange,  
18       and the third voice signal from the telephone, and  
19       divides the first voice signal into two first voice  
20       divided signals, the second voice signal into two  
21       second voice divided signals, and the third voice  
22       signal into two third voice divided signals, and the  
23       mixer receives the voice divided signals, mixes a  
24       first and a second voice divided signal then sends  
25       the mixed signal to the telephone and the telephone  
26       receiver, mixes the other first and a third voice  
27       divided signal then sends the mixed signal to the  
28       telephone exchange, and mixes the other second and  
29       the other third voice divided signals then sends the  
30       mixed signal to the computer.

1       23. The multiple communication system according to claim  
2       22, wherein the shared device further comprising:  
3       a first amplifier, disposed between the computer and the  
4       voice divider for amplifying the first voice signal  
5       before sending it to the voice divider;  
6       a second amplifier, disposed between the telephone  
7       exchange and the voice divider for amplifying the  
8       second voice signal before sending it to the voice  
9       divider; and  
10       an impedance matcher, disposed between the first amplifier  
11       and the computer for adjusting the volume and

12           voice-frequency of the voice signal from the computer  
13           according to a differential impedance between the  
14           computer and the telephone.

1           24. The multiple communication system according to claim  
2           23, further comprising a video camera installed in the computer  
3           for recording and sending video of the telephone receiver user  
4           to the remote Internet client.

1           25. A multiple communication method, comprising the step  
2           of:

3           providing a computer for communication with at least a  
4           remote Internet client through a communication  
5           network, wherein the communication network comprises  
6           at least one of an Internet connection, a local area  
7           network, and a leased line;

8           providing a telephone for communicating with a remote  
9           telephone used by a remote telephone user through a  
10          telephone network;

11          providing a telephone receiver for being used by the  
12          telephone receiver user; and

13          providing a shared device for connecting to the computer,  
14          the telephone, and the telephone receiver, wherein  
15          the shared device comprises a voice divider and a  
16          mixer for receiving voice signals from three parties:  
17          the remote Internet client, the remote telephone  
18          user, and the telephone receiver user, then mixing  
19          the voice signals from any two parties and  
20          transmitting to the third party in order to establish  
21          multiple communication connection between the remote

22 Internet client, the remote telephone, and the  
23 telephone receiver user.

1 26. The multiple communication method according to claim  
2 25, further comprising  
3 providing a first amplifier disposed between the computer  
4 and the voice divider for amplifying the first voice  
5 signal before sending it to the voice divider;  
6 providing a second amplifier disposed between the  
7 telephone and the voice divider for amplifying the  
8 second voice signal before sending it to the voice  
9 divider; and  
10 providing an impedance matcher disposed between the first  
11 amplifier and the computer for adjusting the volume  
12 and voice-frequency of the voice signal from the  
13 computer according to a differential impedance  
14 between the computer and the telephone.

1 27. A multiple communication method, comprising the step  
2 of:  
3 providing a computer for communicating with at least one  
4 remote Internet client through a communication  
5 network, wherein the communication network comprises  
6 at least an Internet connection, a local area  
7 network, and a leased line;  
8 providing a telephone for communicating with a remote  
9 telephone used by a remote telephone user through a  
10 telephone network;  
11 providing a telephone receiver for being used by the  
12 telephone receiver user; and

13 providing a shared device for connecting to the computer,  
14 the telephone, and the telephone receiver, wherein  
15 the shared device comprises three voice dividers and  
16 three mixers for receiving voice signals  
17 individually from three parties: the remote Internet  
18 client, the remote telephone user, and the telephone  
19 receiver user, then mixing the voice signals from any  
20 two parties and transmitting the mixed signal to the  
21 third party in order to establish multiple  
22 communication connections between the remote  
23 Internet client, the remote telephone user, and the  
24 telephone receiver user.

1 28. The multiple communication method according to claim  
2 27, further comprising  
3 providing a first amplifier disposed between the computer  
4 and the first voice divider for amplifying the first  
5 voice signal before sending to the voice divider;  
6 providing a second amplifier disposed between the  
7 telephone and the second voice divider for amplifying  
8 the second voice signal before sending to the voice  
9 divider; and  
10 providing an impedance matcher disposed between the first  
11 amplifier and the computer for adjusting the volume  
12 and voice-frequency of the voice signal from the  
13 computer according to a differential impedance  
14 between the computer and the telephone.

1 29. A multiple communication method, comprising the step  
2 of:

3       providing a computer for communication with at least one  
4           remote Internet client through a communication  
5           network, wherein the communication network comprises  
6           at least an Internet connection, a local area  
7           network, and a leased line;  
8       providing a telephone exchange for communicating with a  
9           remote telephone used by a remote telephone user  
10          through a telephone network;  
11       providing a telephone and telephone receiver thereof for  
12          being used by the telephone receiver user; and  
13       providing a shared device for connecting the computer, the  
14          telephone exchange, and the telephone, wherein the  
15          shared device comprises a voice divider and a mixer  
16          for receiving voice signals from three parties: the  
17          remote Internet client, the remote telephone, and the  
18          telephone receiver user, then mixing the voice  
19          signals from any two parties and transmitting to the  
20          third party in order to establish multiple  
21          communication between the remote Internet client,  
22          the remote telephone user, and the telephone receiver  
23          user.

1       30. The multiplecommunication method according to claim  
2       29, further comprising  
3       providing a first amplifier disposed between the computer  
4           and the voice divider for amplifying the first voice  
5           signal before sending it to the voice divider;  
6       providing a second amplifier disposed between the  
7          telephone and the voice divider for amplifying the

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8                   second voice signal before sending it to the voice  
9                   divider; and  
10           providing an impedance matcher disposed between the first  
11           amplifier and the computer for adjusting the volume  
12           and voice-frequency of the voice signal from the  
13           computer according to a differential impedance  
14           between the computer and the telephone.  
15